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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,649	07/05/2001	Masaaki Ando	9982-21US (1108US)	7728

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EXAMINER

KIM, SUN U

ART UNIT PAPER NUMBER

1723

DATE MAILED: 02/20/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-8

Office Action Summary

Application No.
09/899,649

Applicant(s)
Ando et al.

Examiner
John Kim

Art Unit
1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 2, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) 15-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3, 4, 5 6) ☐ Other:

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1. Claims 15-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 7.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,432,310 (hereinafter referred to as Andou '310) in view of U.S. Patent No. 5,376,278 (hereinafter referred to as Salem). Andou '310 teaches system and method of running a spiral wound membrane module, comprising a pressure vessel (10) having a raw liquid inlet (13) and one or plurality of spiral envelope separation membranes (1) wound on the outer peripheral surface of a perforated hollow pipe (2) and allowing back wash reverse filtration under high back pressure (see col. 32, line 66 - col. 33, line 15), comprises the step of introducing washing liquid i.e. permeate into a permeate outlet (14) connected to the perforated pipe (2) for performing a back wash reverse filtration, axially feeding raw liquid through separation membrane (1) and taking out axially fed raw liquid through raw liquid outlet (15), refeeding a part of raw liquid and/or washing liquid to the raw liquid inlet (13) (see figures 1-17; col. 24, line 55 - col. 35, line 22). Andou '310 further teaches that it is difficult to completely remove the contaminants by back

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wash reverse filtration employing only the permeate as the wash water (see col. 29, lines 44-52) and that back wash reverse filtration is periodically performed with permeate or air in a hollow fiber membrane elements to prevent clogging (see col. 2, lines 40-42). Claims 1-14 essentially differ from the system and method of Andou '310 in reciting the step and gas injection means of injecting gas of not more than 0.3 MPa from at least one opening end of the perforated hollow pipe. Salem teaches system and method of running a spiral wound membrane elements with perforated central core (160) comprising backwashing membrane element by feeding water and air via air conduit (60) thorough a perforated center such that water and air passes radially outwardly through the membrane to dislodge particulates on the membrane (see figures 1-2; col. 7, lines 26-27, 54-57; col. 13, line 9 - col. 14, line 35; col. 16, lines 7-45). It would have been obvious to a person of ordinary skill in the art to modify the system and method of Andou '310 to incorporate air injection system and method of Salem to improve removal of contaminants on membrane.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,402,956 teaches spiral wound membrane system and method.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (703) 308-2350. The examiner can normally be reached on weekdays from 7:00 AM - 3:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for official response

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after final action is (703) 872-9311, and the fax phone number for all other official faxes is (703) 872-9310.

When sending a draft amendment by fax, please mark the paper as "DRAFT"; otherwise, mark the paper "OFFICIAL". This will expedite the processing of the paper.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.


John Kim
Primary Examiner
Art Unit 1723

J. Kim
February 5, 2003